ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH ISO 21930:2017 & ISO 14025

Vibration Isolation Hanger
Vibro-Acoustics by Swegon

EPD HUB, HUB-5384
Published on 14.02.2026, last updated on 14.02.2026, valid until 14.02.2031

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Vibro-Acoustics by Swegon
Address	936 Esther Ln, Murfreesboro, TN 37129; U.S.A.
Contact details	greg.schmelig@swegon.com
Website	www.vibro-acoustics.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	ISO 21930:2017 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Greg Schmelig, Vibro-Acoustics by Swegon
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Imane Uald Lamkaddam as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Vibration Isolation Hanger
Additional labels	
Product reference	SHRB-SN 200
Place(s) of raw material origin	United States
Place of production	Murfreesboro, TN, United States
Place(s) of installation and use	United States
Period for data	1.1.2024 thru 12.31.2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	28.2

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of Vibration Isolation Hanger
Declared unit mass	.4995 kg
Mass of packaging	0.0157995 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	1.47
GWP-total, A1-A3 ($kgCO_2e$)	1.73
Secondary material, inputs (%)	21.2
Secondary material, outputs (%)	75.7
Total energy use, A1-A3 (kWh)	4.41
Net freshwater use, A1-A3 (m^3)	0.11

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Vibro-Acoustics by Swegon manufacturers vibration isolation, seismic and noise control materials as well as provides associated engineering.

People spend most of their time indoors, which is why we need a sound indoor climate for our health, well-being, and happiness. Swegon's ambition is to achieve the world's best indoor environment with the least possible impact on the external environment. Our business models, services, products, and systems are all designed to provide the right solution for each individual project.

Swegon Group AB is a market leading supplier in the field of indoor environment, offering solutions for ventilation, heating, cooling and climate optimization, as well as connected services and expert technical support. Swegon has subsidiaries in and distributors all over the world and production plants in Europe, North America and India.
Further information can be found at: www.vibro-acoustics.com

PRODUCT DESCRIPTION

Vibro-Acoustics vibration isolation hangers with Neoprene and Bottom Cup (SHRB) series provide general vibration isolation for suspended equipment with no lateral loads or changes in operating weight. Compression cups are powder-coated and available in zinc-plated as an option depending on the model. The SHRB series includes the addition of a neoprene element for isolation of high frequency vibration. Further derivations of the SHRB spring hangers are available without the neoprene element (SHB; spring hanger with neoprene bottom cup only) and/or without the neoprene bottom cup (SHR, spring hanger with neoprene element only) or (SH; Spring hanger without neoprene element and neoprene bottom cup). Finally, we offer our neoprene element only vibration isolation hanger (NH).

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	76	U.S.A.
Minerals	-	-
Fossil materials	24	Asia
Bio-based materials	-	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	0.004745

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of vibration isolation hanger
Mass per declared unit	.4995 kg
Functional unit	-
Reference service life	20

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = ND. Modules not relevant = NR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory. Electricity consumption at the Murfreesboro facility is modeled using a specified electricity product supplied by Tennessee Valley Authority, with associated renewable energy attributes retained and retired on behalf of the facility. Electricity usage has been calculated based on lighting fixtures serving the production area in which the representative vibration isolation hanger is assembled using 2024 data. Minimal use of electricity in the assembly of the product is required. The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

The vibration isolation hangers are manufactured from steel and rubber and delivered to Swegon's production facility, where they are assembled on site. Transportation of components to the manufacturing site is accounted based both on actual distance and mode of transport and on generic datasets. Once assembled, the products are secured with plastic zip ties and packaged in cardboard boxes filled with kraft paper for distribution.

The products are assembled in our factory and has no manufacturing waste during that process, nor are any ancillary materials used.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. The transportation to the construction site is calculated based on a weighted average of sales. The product is sold ready to be installed, and no raw material waste is generated from installation (A5). The end-of-life treatment

of product packaging is declared, and scenario per packaging material has been applied with different ratios of recycling, incineration, and disposal in landfill.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

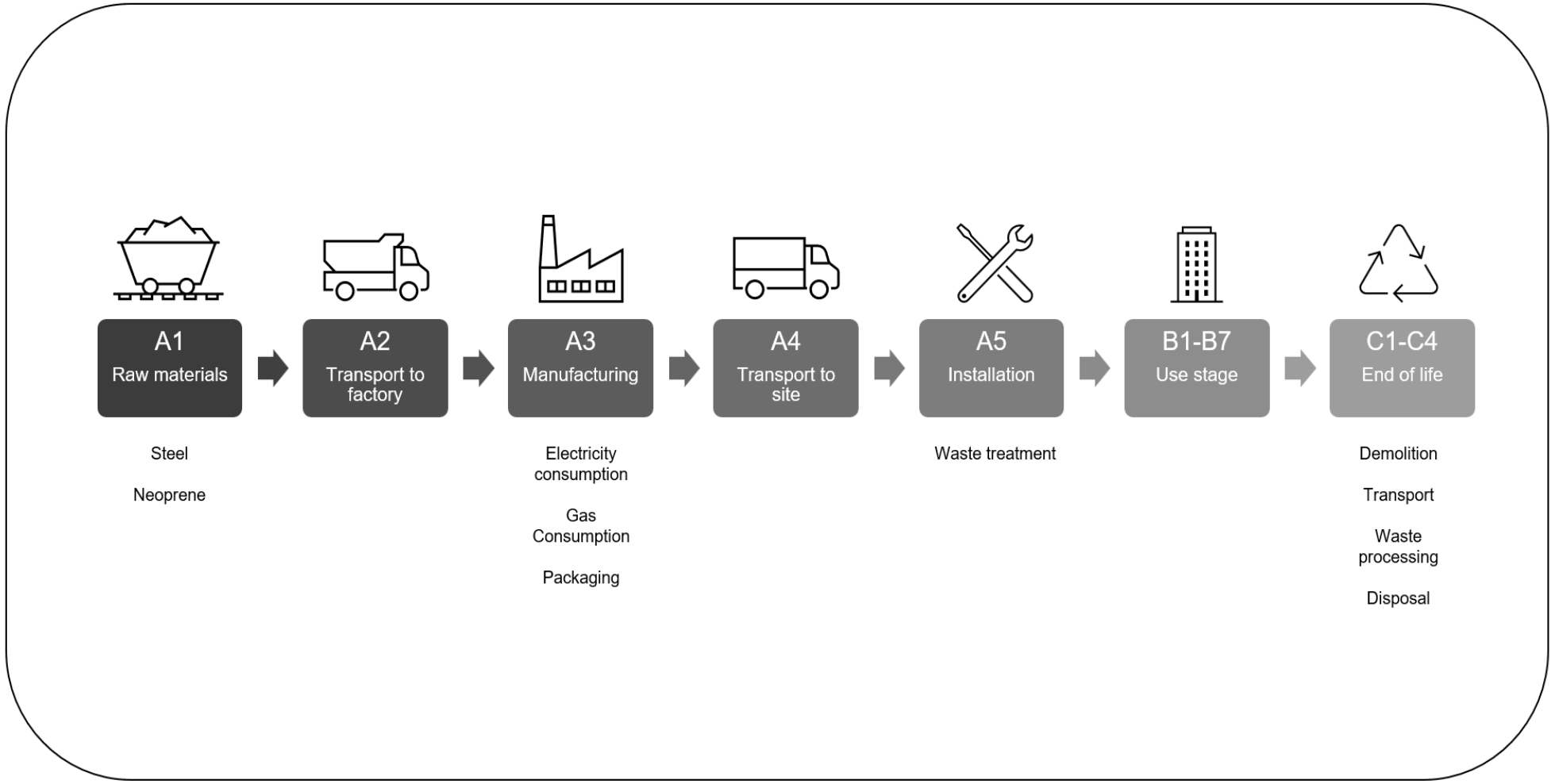
At the end of product life, the vibration isolation hanger units are assumed to be demolished. The impact of deconstruction (C1) is modeled based on literature data for energy use in demolition. Waste processing (C3) and disposal (C4) are modeled with consideration to the markets where the vibration isolation hanger units are sold. The applied scenarios, which are based on literature data, include different ratios of material recycling, incineration, and landfill for the included materials.

For steel, it is assumed that 85% is recycled and 15% is landfilled. For rubber components, 73% is assumed to be incinerated with energy recovery and 27% is sent to landfill.

Transportation distances associated with the end-of-life treatment (C2) of these materials are assumed to be the U.S. nationwide average distance from town or city center to an active landfill which is approximately 20 miles (32 km) and to a recycling facility it is approximately 6 miles (10 km) per EPA.gov. All transportation is carried out using a 16-32 metric ton freight lorry compliant with EURO 5 standards. It is assumed that material for recycling is collected separately.

Due to the material and energy recovery potential of the components included in the product, the end-of-life can be converted into recycled raw materials or energy through incineration. The potential environmental benefits and burdens associated with recycling and energy recovery processes are accounted for in Module D.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	-

This EPD is product and factory specific.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD System Verification v3.2.3. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

ENVIRONMENTAL IMPACT DATA

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	1.04E+00	1.20E-01	5.69E-01	1.73E+00	2.29E-01	3.14E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.02E-03	1.40E-01	1.81E-03	-3.93E-02
GWP – fossil	kg CO_2e	1.04E+00	1.20E-01	3.15E-01	1.47E+00	2.29E-01	2.62E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.02E-03	1.40E-01	1.81E-03	-3.18E-02
GWP – biogenic	kg CO_2e	-6.64E-04	7.24E-05	-1.74E-02	-1.80E-02	5.10E-05	2.88E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.27E-07	-2.37E-04	-1.08E-06	-6.35E-03
GWP – LULUC	kg CO_2e	5.02E-04	4.24E-05	2.72E-01	2.72E-01	1.04E-04	5.38E-07	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.52E-07	1.31E-05	3.55E-07	-1.07E-03
Ozone depletion pot.	kg CFC_{-11}e	7.79E-09	2.49E-09	2.98E-09	1.33E-08	3.39E-09	1.18E-11	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.47E-11	1.48E-10	1.65E-11	-6.62E-10
Acidification potential	mol H^+e	3.76E-03	2.62E-04	8.33E-04	4.86E-03	5.24E-04	4.23E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.43E-06	1.28E-04	4.24E-06	-7.43E-04
EP-freshwater[2)]	kg Pe	3.45E-04	8.94E-06	8.21E-05	4.36E-04	1.79E-05	1.58E-07	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.90E-08	6.15E-06	5.32E-08	-4.75E-05
EP-marine	kg Ne	8.24E-04	6.26E-05	2.51E-04	1.14E-03	1.21E-04	8.04E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.12E-06	3.18E-05	3.26E-05	-6.10E-05
EP-terrestrial	mol Ne	8.84E-03	6.76E-04	2.65E-03	1.22E-02	1.31E-03	1.46E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.22E-05	3.55E-04	1.74E-05	-6.11E-04
POCP ("smog")[3)]	kg NMVOCe	3.48E-03	4.06E-04	6.60E-04	4.54E-03	7.34E-04	6.02E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.94E-06	1.02E-04	6.45E-06	-1.95E-04
ADP-minerals & metals[4)]	kg Sbe	3.09E-06	4.20E-07	6.31E-08	3.57E-06	7.65E-07	4.12E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.04E-09	6.15E-07	1.05E-09	-3.74E-05
ADP-fossil resources	MJ	1.26E+01	1.70E+00	1.32E+00	1.56E+01	3.22E+00	1.13E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.45E-02	1.41E-01	1.40E-02	-6.27E-01
Water use[5)]	m^3e depr.	3.24E-01	9.04E-03	-3.66E-01	-3.22E-02	1.51E-02	1.78E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.00E-05	8.88E-03	4.90E-05	-8.74E-02

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	8.83E-08	8.97E-09	2.00E-08	1.17E-07	1.71E-08	1.18E-10	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.30E-11	1.65E-09	9.49E-11	2.15E-10
Ionizing radiation[6)]	kBq U235e	2.20E-02	1.97E-03	1.95E+05	1.95E+05	2.63E-03	1.96E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.23E-05	5.05E-04	1.05E-05	-1.23E-02
Ecotoxicity (freshwater)	CTUe	1.02E+01	1.51E+00	1.70E+02	1.82E+02	5.11E-01	3.61E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.15E-03	8.33E-01	5.28E-02	-8.50E+00
Human toxicity, cancer	CTUh	1.05E-09	2.02E-11	7.28E-09	8.36E-09	3.83E-11	7.73E-13	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.70E-13	9.68E-12	2.44E-13	-2.70E-10
Human tox. non-cancer	CTUh	4.94E-09	1.07E-09	1.92E-06	1.92E-06	2.03E-09	4.63E-11	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.28E-12	5.65E-10	3.54E-11	-6.81E-09
SQP[7)]	-	2.81E+00	1.02E+00	1.12E+00	4.94E+00	1.95E+00	9.50E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.22E-02	2.35E-01	2.89E-02	-3.07E-01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	4.68E-01	2.75E-02	6.80E-02	5.64E-01	4.47E-02	-1.94E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.99E-04	2.00E-02	1.62E-04	-4.42E-01
Renew. PER as material	MJ	0.00E+00	0.00E+00	1.57E-01	1.57E-01	0.00E+00	-1.57E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renew. PER	MJ	4.68E-01	2.75E-02	2.25E-01	7.21E-01	4.47E-02	-3.51E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.99E-04	2.00E-02	1.62E-04	-4.42E-01
Non-re. PER as energy	MJ	1.11E+01	1.70E+00	2.47E+00	1.53E+01	3.22E+00	-1.38E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.45E-02	-9.83E-01	-5.30E-01	-6.27E-01
Non-re. PER as material	MJ	1.49E+00	0.00E+00	1.80E-01	1.67E+00	0.00E+00	-1.80E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-1.08E+00	-4.01E-01	0.00E+00
Total use of non-re. PER	MJ	1.26E+01	1.70E+00	2.65E+00	1.70E+01	3.22E+00	-3.18E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.45E-02	-2.07E+00	-9.31E-01	-6.27E-01
Secondary materials	kg	1.06E-01	7.69E-04	6.12E-03	1.13E-01	1.46E-03	9.95E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.32E-06	1.61E-04	3.94E-06	4.05E-03
Renew. secondary fuels	MJ	6.89E-04	1.01E-05	1.49E-03	2.19E-03	1.87E-05	8.40E-08	ND	ND	ND	ND	ND	ND	ND	0.00E+00	8.04E-08	7.12E-06	7.88E-08	6.00E-05
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	7.01E-03	2.11E-04	1.04E-01	1.11E-01	4.40E-04	-1.91E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.06E-06	1.74E-04	-4.47E-05	-2.16E-03

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.66E-01	2.65E-03	9.42E-04	1.69E-01	5.64E-03	1.02E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.49E-05	5.02E-03	1.81E-05	1.21E-02
Non-hazardous waste	kg	2.13E+00	5.57E-02	2.95E-02	2.21E+00	1.06E-01	3.25E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.63E-04	7.60E-02	7.47E-02	-7.16E-02
Radioactive waste	kg	5.39E-06	4.86E-07	9.00E-07	6.78E-06	6.44E-07	4.80E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.01E-09	1.25E-07	2.56E-09	-3.18E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	3.78E-01	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1.03E+00	1.19E-01	3.14E-01	1.46E+00	2.28E-01	5.84E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.01E-03	1.40E-01	1.75E-03	-3.28E-02
Ozone depletion Pot.	kg $CFC_{-11}e$	6.65E-09	1.99E-09	2.46E-09	1.11E-08	2.71E-09	9.49E-12	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.17E-11	1.28E-10	1.31E-11	-5.41E-10
Acidification	kg SO_2e	3.05E-03	2.10E-04	7.60E-04	4.02E-03	4.22E-04	3.22E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.62E-06	1.02E-04	3.14E-06	-6.55E-04
Eutrophication	kg PO_4^3e	1.77E-03	5.48E-05	1.11E-04	1.93E-03	1.01E-04	5.27E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.39E-07	1.65E-05	2.28E-06	-6.11E-05
POCP (“smog”)	kg C_2H_4e	4.45E-04	2.14E-05	6.41E-07	4.67E-04	4.10E-05	1.06E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.34E-07	6.08E-06	4.77E-07	-2.05E-05
ADP-elements	kg Sbe	3.02E-06	4.11E-07	6.42E-08	3.50E-06	7.47E-07	4.02E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.96E-09	6.10E-07	1.02E-09	-3.74E-05
ADP-fossil	MJ	1.23E+01	1.67E+00	1.37E+00	1.53E+01	3.17E+00	1.10E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.43E-02	1.33E-01	1.39E-02	-4.30E-01

ENVIRONMENTAL IMPACTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Radioactive waste, high	kg	1.60E-06	1.22E-07	1.96E-07	1.92E-06	1.92E-07	1.43E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	8.88E-10	3.81E-08	7.36E-10	-1.05E-06
Radioactive waste, int/low	kg	3.79E-06	3.64E-07	7.04E-07	4.86E-06	4.53E-07	3.38E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.12E-09	8.70E-08	1.83E-09	-2.13E-06

ENVIRONMENTAL IMPACTS – FRENCH NATIONAL COMPLEMENTS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-elements	kg Sbe	2.35E-06	4.75E-11	4.34E-08	2.40E-06	7.47E-07	4.02E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.96E-09	5.11E-09	1.02E-09	-3.78E-05
Hazardous waste disposed	kg	1.66E-01	2.65E-03	9.42E-04	1.69E-01	5.64E-03	1.02E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.49E-05	5.02E-03	1.81E-05	1.21E-02
Non-haz. waste disposed	kg	2.13E+00	5.57E-02	2.95E-02	2.21E+00	1.06E-01	3.25E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.63E-04	7.60E-02	7.47E-02	-7.16E-02
Air pollution	m^3	4.18E+02	2.22E+01	3.09E+01	4.71E+02	4.49E+01	2.64E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.28E-01	5.77E+00	1.37E-01	-2.16E+01
Water pollution	m^3	3.10E+00	1.00E+00	3.06E+01	3.47E+01	1.50E+00	6.07E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.64E-03	6.04E-02	7.30E-03	-1.60E+00

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	1.04E+00	1.20E-01	5.86E-01	1.74E+00	2.29E-01	2.62E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.02E-03	1.40E-01	1.82E-03	-3.29E-02

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH4 fossil, CH4 biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO2 is set to zero.

ENVIRONMENTAL IMPACTS – TRACI 2.1. / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1.02E+00	1.18E-01	3.12E-01	1.45E+00	2.26E-01	5.46E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.00E-03	1.40E-01	1.65E-03	-3.25E-02
Ozone Depletion	kg CFC_{-11}e	8.41E-09	2.63E-09	3.07E-09	1.41E-08	3.58E-09	1.24E-11	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.55E-11	1.60E-10	1.74E-11	-6.94E-10
Acidification	kg SO_2e	3.24E-03	2.24E-04	7.24E-04	4.19E-03	4.51E-04	3.85E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.05E-06	1.10E-04	3.90E-06	-5.90E-04
Eutrophication	kg Ne	9.05E-04	3.11E-05	6.65E-05	1.00E-03	5.81E-05	1.08E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.22E-07	1.28E-05	3.34E-06	-4.99E-05
POCP (“smog”)	kg O_3e	5.20E-02	4.64E-03	1.47E-02	7.13E-02	8.83E-03	8.47E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.69E-05	2.02E-03	1.07E-04	-3.39E-03
ADP-fossil	MJ	8.81E+00	2.05E-04	2.22E-01	9.03E+00	3.22E+00	-1.38E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.46E-02	-1.10E+00	-5.30E-01	-1.05E+00

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity production, Middle Tennessee Electric, N.G, Coal, Diesel, Hydro, Nuclear, Renewables
Electricity kg CO2e / kWh	0,09
District heating data source and quality	Heat, natural gas; Atmos Energy
District heating kg CO2e / kWh	

Transport scenario documentation A4

Scenario parameter	Value
Fuel and vehicle type. Eg, electric truck, diesel powered truck	Diesel powered truck
Average transport distance, km	1071
Capacity utilization (including empty return) %	50
Bulk density of transported products	-
Volume capacity utilization factor	1

Installation scenario documentation A5

Scenario information	Value
Ancillary materials for installation (specified by material) / kg or other units as appropriate	-
Water use / m³	-
Other resource use / kg	-
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	-
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	Plastic Zip Ties: 0,00375 kg Cardboard Box: 0,131 kg Kraft Paper: 0,0107 kg
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	Plastic packaging: Recycled 9%, Incinerated 12% & Landfilled 79%. Cardboard/paper: Incineration 10%, landfill 24%, and 66% recycled
Direct emissions to ambient air, soil and water / kg	0

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	0.84 lbs
Collection process – kg collected with mixed waste	0.27 lbs
Recovery process – kg for re-use	0 lbs
Recovery process – kg for recycling	0.84 lbs
Recovery process – kg for energy recovery	0.09 lbs
Disposal (total) – kg for final deposition	0.18 lbs
Scenario assumptions e.g. transportation	Truck, 16-32 tonnes, EURO5 (km). Landfill: 32 km Recycling: 10 km

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

Imane Uald Lamkaddam as an authorized verifier for EPD Hub Limited 14.02.2026

ANNEX 1

PRODUCTS INCLUDED IN THIS EPD

This EPD concerns the Vibro-Acoustics by Swegon vibration isolation hangers. The environmental performance for several sizes is listed in the tables below. The GWP-fossil impact presented has been obtained by individually modelling each size. The total weight includes the product weight and the packaging weight.

Product name	Total weight (kg)	Total weight (lbs)	GWP-Fossil, A1-A3 (kg CO_2e/item)	GWP-Fossil, A1-A3 (lbs CO_2e/item)
SHRB-SN-15	0.45	0.99	1.31	2.90
SHRB-SN-30	0.45	1.00	1.33	2.93
SHRB-SN-45	0.47	1.04	1.37	3.02
SHRB-SN-60	0.48	1.05	1.38	3.05
SHRB-SN-100	0.49	1.08	1.40	3.09
SHRB-SN-150	0.49	1.07	1.41	3.10
SHRB-SN-200	0.52	1.14	1.47	3.24
SHRB-1N-50	2.28	5.04	5.27	11.61
SHRB-1N-100	2.38	5.26	5.47	12.07
SHRB-1N-150	2.40	5.28	5.50	12.12
SHRB-1N-200	2.44	5.37	5.58	12.30
SHRB-1N-300	2.57	5.68	5.86	12.92
SHRB-1N-400	2.58	5.69	5.88	12.96
SHRB-1N-500	2.76	6.08	6.24	13.77
SHRB-1N-600	2.78	6.13	6.30	13.90
SHRB-1N-800	2.90	6.39	6.54	14.43
SHRB-2N-50	3.24	7.15	7.15	15.77
SHRB-2N-100	3.34	7.37	7.35	16.21
SHRB-2N-200	3.57	7.87	7.82	17.24
SHRB-2N-300	3.58	7.90	7.85	17.31
SHRB-2N-400	3.71	8.17	8.11	17.88
SHRB-2N-500	3.73	8.24	8.17	18.01
SHRB-2N-600	3.95	8.70	8.61	18.99
SHRB-2N-800	3.79	8.35	8.28	18.26
SHRB-2N-1000	3.97	8.75	8.65	19.08

Product name	Total weight (kg)	Total weight (lbs)	GWP-Fossil, A1-A3 (kg CO_2e/item)
SHB-SN-15	0.39	0.85	1.13
SHB-SN-30	0.39	0.87	1.15
SHB-SN-45	0.41	0.89	1.17
SHB-SN-60	0.41	0.91	1.18
SHB-SN-100	0.42	0.93	1.20
SHB-SN-150	0.42	0.92	1.20
SHB-SN-200	0.45	0.98	1.25
SHB-1N-50	1.95	4.31	4.41
SHB-1N-100	2.05	4.53	4.62
SHB-1N-150	2.07	4.56	4.64
SHB-1N-200	2.11	4.64	4.72
SHB-1N-300	2.24	4.95	5.01
SHB-1N-400	2.24	4.95	5.01
SHB-1N-500	2.42	5.34	5.37
SHB-1N-600	2.44	5.38	5.41
SHB-1N-800	2.56	5.64	5.65
SHB-2N-50	2.94	6.48	6.35
SHB-2N-100	2.84	6.27	6.13
SHB-2N-200	3.07	6.77	6.59
SHB-2N-300	3.08	6.80	6.63
SHB-2N-400	3.20	7.06	6.87
SHB-2N-500	3.23	7.13	6.93
SHB-2N-600	3.44	7.58	7.35
SHB-2N-800	3.28	7.22	7.02
SHB-2N-1000	3.46	7.63	7.40

Product name	Total weight (kg)	Total weight (lbs)	GWP-Fossil, A1-A3 (kg CO_2e/item)	GWP-Fossil, A1-A3 (lbs CO_2e/item)
SHR-SN-15	0.45	1.00	1.31	2.88
SHR-SN-30	0.46	1.01	1.32	2.91
SHR-SN-45	0.47	1.05	1.36	3.00
SHR-SN-60	0.48	1.06	1.38	3.03
SHR-SN-100	0.49	1.08	1.40	3.08
SHR-SN-150	0.49	1.08	1.40	3.08
SHR-SN-200	0.52	1.14	1.46	3.21
SHR-1N-50	2.61	5.75	5.90	13.02
SHR-1N-100	2.71	5.98	6.11	13.47
SHR-1N-150	2.72	6.00	6.13	13.53
SHR-1N-200	2.76	6.09	6.22	13.71
SHR-1N-300	2.90	6.39	6.50	14.33
SHR-1N-400	2.90	6.40	6.51	14.36
SHR-1N-500	3.08	6.80	6.88	15.17
SHR-1N-600	3.11	6.85	6.94	15.30
SHR-1N-800	3.22	7.11	7.18	15.83
SHR-1S-900	6.20	13.68	13.27	29.27
SHR-1S-1000	5.76	12.71	12.37	27.28
SHR-1S-1100	6.03	13.31	12.93	28.50
SHR-1S-1200	6.09	13.42	13.03	28.73
SHR-1S-1300	6.22	13.72	13.31	29.36
SHR-1S-1400	6.22	13.72	13.32	29.36
SHR-1S-1500	6.40	14.12	13.68	30.17
SHR-1S-1600	6.42	14.16	13.72	30.25
SHR-1S-1800	6.54	14.41	13.96	30.78
SHR-1S-2000	6.60	14.56	14.09	31.07
SHR-1S-2300	6.74	14.86	14.37	31.68

Product name	Total weight (kg)	Total weight (lbs)	GWP-Fossil, A1-A3 (kg CO_2e/item)	GWP-Fossil, A1-A3 (lbs CO_2e/item)
SHR-2S-800	8.01	17.67	18.24	40.22
SHR-2S-900	8.31	18.33	18.85	41.57
SHR-2S-1000	8.54	18.83	19.32	42.60
SHR-2S-1100	8.55	18.86	19.35	42.67
SHR-2S-1200	8.67	19.13	19.60	43.21
SHR-2S-1300	8.70	19.19	19.65	43.34
SHR-2S-1400	8.91	19.64	20.08	44.27
SHR-2S-1600	8.75	19.28	19.74	43.53
SHR-2S-1800	8.93	19.70	20.12	44.38
SHR-2S-2000	8.64	19.04	19.52	43.04
SHR-2S-2300	9.18	20.24	20.63	45.49
SHR-2N-50	3.18	7.01	6.93	15.29
SHR-2N-100	3.28	7.23	7.13	15.73
SHR-2N-200	3.51	7.73	7.60	16.75
SHR-2N-300	3.52	7.76	7.63	16.82
SHR-2N-400	3.64	8.03	7.89	17.39
SHR-2N-500	3.67	8.10	7.95	17.52
SHR-2N-600	3.89	8.57	8.39	18.51
SHR-2N-800	3.72	8.21	8.06	17.77
SHR-2N-1000	3.91	8.61	8.43	18.59
SHR-3N-100	5.25	11.57	11.30	24.93
SHR-3N-200	5.15	11.36	11.11	24.51
SHR-3N-400	5.47	12.05	11.76	25.93
SHR-3N-700	5.66	12.48	12.17	26.84

Product name	Total weight (kg)	Total weight (lbs)	GWP-Fossil, A1-A3 (kg CO_2e/item)	GWP-Fossil, A1-A3 (lbs CO_2e/item)
SH-SN-15	0.38	0.83	1.10	2.43
SH-SN-30	0.38	0.85	1.12	2.46
SH-SN-45	0.40	0.87	1.14	2.51
SH-SN-60	0.40	0.89	1.15	2.54
SH-SN-100	0.41	0.91	1.17	2.59
SH-SN-150	0.41	0.90	1.17	2.57
SH-SN-200	0.44	0.96	1.22	2.69
SH-1N 50	1.91	4.22	4.27	9.41
SH-1N 100	2.01	4.44	4.47	9.87
SH-1N 150	2.03	4.47	4.50	9.92
SH-1N 200	2.07	4.55	4.58	10.10
SH-1N 300	2.20	4.86	4.86	10.72
SH-1N 400	2.20	4.86	4.86	10.72
SH-1N 500	2.38	5.25	5.23	11.53
SH-1N 600	2.40	5.29	5.27	11.61
SH-1N 800	2.52	5.55	5.51	12.14
SH-1S 900	5.93	13.08	12.57	27.72
SH-1S 1000	5.49	12.11	11.67	25.74
SH-1S 1100	5.76	12.71	12.22	26.96
SH-1S 1200	5.81	12.82	12.33	27.19
SH-1S 1300	5.95	13.12	12.61	27.81
SH-1S 1400	5.95	13.13	12.61	27.81
SH-1S 1500	6.13	13.52	12.98	28.62
SH-1S 1600	6.15	13.56	13.02	28.70
SH-1S 1800	6.27	13.82	13.26	29.23

Product name	Total weight (kg)	Total weight (lbs)	GWP-Fossil, A1-A3 (kg CO_2e/item)	GWP-Fossil, A1-A3 (lbs CO_2e/item)
SH-2N 50	2.88	6.36	6.16	13.58
SH-2N 100	2.98	6.57	6.36	14.02
SH-2N 200	3.21	7.07	6.82	15.04
SH-2N 300	3.22	7.11	6.85	15.11
SH-2N 400	3.34	7.37	7.10	15.65
SH-2N 500	3.37	7.43	7.16	15.78
SH-2N 600	3.58	7.89	7.58	16.71
SH-2N 800	3.41	7.53	7.25	15.98
SH-2N 1000	3.60	7.94	7.63	16.82
SH-2S 800	6.98	15.39	14.85	32.75
SH-2S 900	7.28	16.05	15.47	34.10
SH-2S 1000	7.51	16.55	15.93	35.13
SH-2S 1100	7.52	16.59	15.96	35.19
SH-2S 1200	7.64	16.85	16.21	35.74
SH-2S 1300	7.67	16.91	16.27	35.87
SH-2S 1400	7.88	17.37	16.69	36.79
SH-2S 1600	7.71	17.01	16.35	36.06
SH-2S 1800	7.90	17.42	16.74	36.90
SH-3N 100	5.11	11.26	10.87	23.97
SH-3N 200	5.02	11.06	10.68	23.55
SH-3N 400	5.32	11.74	11.31	24.95
SH-3N 700	5.51	12.15	11.70	25.80
SH-4N 200	5.20	11.47	11.07	24.40
SH-4N 400	5.33	11.76	11.33	24.98
SH-4N 600	5.40	11.91	11.48	25.31

Product name	Total weight (kg)	Total weight (lbs)	GWP-Fossil, A1-A3 (kg CO_2e/item)	GWP-Fossil, A1-A3 (lbs CO_2e/item)
NH-1-30	0.36	0.79	0.93	2.04
NH-1-60	0.36	0.80	0.94	2.08
NH-1-100	0.36	0.80	0.94	2.08
NH-1-150	0.37	0.81	0.95	2.10
NH-1-200	0.37	0.81	0.95	2.10
NH-2-300	0.81	1.79	1.98	4.36
NH-2-400	0.81	1.79	1.99	4.39
NH-2-500	0.81	1.79	1.99	4.39
NH-2-700	0.82	1.81	2.02	4.45
NH-2-1000	0.82	1.80	2.01	4.43